

Attachment 2

Proposed TS Amendment No. 87

April 28, 1989

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An upper bound envelope for F_Q^N defined by specification 3.10.b.1 has been determined from extensive analyses considering all operating maneuvers consistent with the technical specifications on power distribution control as given in Section 3.10. The results of the loss of coolant accident analyses based on this upper bound envelope indicate the peak clad temperatures remain below the 2200°F limit.

The $F_Q^N(Z)$ limits of specification 3.10.b.1.A include consideration of enhanced fission gas release at high burnup, off-gassing (release of absorbed gases), and other effects in fuel supplied by Advanced Nuclear Fuels Company. The result of these analyses show that no additional burnup dependent penalty need be applied for Advanced Nuclear Fuels Company fuel (7).

When a F_Q^N measurement is taken, both experimental error and manufacturing tolerance must be allowed for. Five percent is the appropriate allowance for a full core map taken with the movable incore detector flux mapping system and three percent is the appropriate allowance for manufacturing tolerance.

In specification 3.10.b.1 and 3.10.b.4 F_Q^N is arbitrarily limited for $P \leq 0.5$ (except for low power physics tests).

$F_{\Delta H}^N$ Nuclear Enthalpy Rise Hot Channel Factor

$F_{\Delta H}^N$, Nuclear Enthalpy Rise Hot Channel Factor, is defined as the ratio of the integral of linear power along the rod on which minimum DNBR occurs to the average rod power.

4.0 SURVEILLANCE REQUIREMENTS

4.1 OPERATIONAL SAFETY REVIEW

Applicability

Applies to items directly related to safety limits and limiting conditions for operation.

Objective

To assure that instrumentation shall be checked, tested and calibrated, and that equipment and sampling tests shall be conducted at sufficiently frequent intervals to ensure safe operation.

Specification

- a. Calibration, testing, and checking of protective instrumentation channels and testing of logic channels shall be performed as specified in Table TS 4.1-1.
- b. Equipment and sampling tests shall be conducted as specified in Table TS 4.1-2 and TS 4.1-3.
- c. Specified time intervals may be adjusted plus or minus 25% to accommodate normal test procedures. Schedules subject to limits of tables TS 4.1-2,-3.
- d. Whenever containment integrity is not required, only the asterisked items in Tables TS 4.1-1, TS 4.1-2, TS 4.1-3 are applicable.
- e. Discrepancies noted during surveillance program testing will be recorded and corrective actions will be documented in accordance with Section 6 of the Technical Specifications.

Basis

Check

Failures such as blown instrument fuses, defective indicators, or faulted amplifiers which result in "upscale" or "downscale" indication can be easily recognized by simple observation of the functioning of an instrument or system. Furthermore, such failures, are, in many cases, revealed by alarm or annunciator action, and a check supplements this type of built-in surveillance.

5. Reports

- a. Following each inservice inspection of steam generator tubes, if there are any tubes requiring plugging or repairing, the number of tubes plugged or repaired shall be reported to the Commission within 30 days.
- b. The results of the steam generator tube inservice inspection shall be included in the Annual Operating Report for the period in which this inspection was completed. This report shall include:
 1. Number and extent of tubes inspected.
 2. Location and percent of wall-thickness penetration for each indication of a degradation.
 3. Identification of tubes plugged.
 4. Identification of tubes repaired.
- c. Results of a steam generator tube inspection which fall into Category C-3 require prompt (within 4 hours) notification of the Commission consistent with 10CFR50.72(b)(2)(i). A written followup report shall be submitted to the Commission consistent with Specification 4.2.b.5.a, using the Licensee Event Report System, to satisfy the intent of 10 CFR 50.73(a)(2)(ii).

Basis

Technical Specification 4.2.b.5

Category C-3 inspection results are considered abnormal degradation to a principal safety barrier and are therefore reportable under 10 CFR 50.72(b)(2)(i) and 10 CFR 50.73(a)(2)(ii).

References

- (1) WCAP 7832: "Evaluation of Steam Generator Tube, Tube Sheet, and Divider Plate Under Combined LOCA Plus SSE Conditions".
- (2) E. W. James, WPSC, to A. Schwencer, NRC, dated September 6, 1977.
- (3) WCAP 11643, Kewaunee Steam Generator Sleaving Report, Revision 1, November 1988 (Proprietary).

Auxiliary Building Special Ventilation System (TS 4.4.d)

Demonstration of the automatic initiation capability is necessary to assure system performance capability.(4)

Periodic checking of the inlet heaters and associated controls for each train will provide assurance that the system has the capability of reducing inlet air humidity so that charcoal adsorber efficiency is enhanced.

In-place testing procedures will be established utilizing applicable sections of ANSI N510 - 1975 standard as a procedural guideline.

Vacuum Breaker Valves (TS 4.4.e)

The vacuum breaker valves are 18" butterfly valves with air to open, spring to close operators. The valve discs are center pivot and rotate when closing to an EPT base material seat. When closed, the disc is positioned fully on the seat regardless of flow or pressure direction. Testing these valves in a direction opposite to that which would occur POST-LOCA verifies leakage rates of both the vacuum breaker valves and the check valves downstream.

References:

- (1) Updated FSAR Section 5.2
- (2) Updated FSAR Section 14.3
- (3) 10CFR Part 50, Appendix J
- (4) Updated FSAR Section 9.6
- (5) Letter from Darrell G. Eisenhut to Carl W. Giesler dated September 30, 1982

TABLE 4.1-3

MINIMUM FREQUENCIES FOR EQUIPMENT TESTS
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<u>Equipment Tests***</u>	<u>Test</u>	<u>Frequency</u>	<u>Maximum Time Between Test (Days)</u>
1. Control Rods	Rod drop times of all full length rods	Each refueling outage	N.A.
	Partial movement of all rods	Every 2 weeks	17
1a. Reactor Trip Breakers	Independent Test(2) Shunt & Undervoltage Trip Attachments	Monthly	37
1b. Reactor Coolant Pump Breakers-Open- Reactor Trip	Operability	Each refueling outage	N.A.
1c. Manual Reactor Trip	Open Trip Reactor(3) Trip & Bypass Bkr	Each refueling outage	N.A.
2. Deleted			
3. Deleted			
4. Containment Isolation Trip	Operability	Each refueling outage	N.A.
5. Refueling System Interlocks	Operability	Prior to fuel movement each refueling outage	N.A.
6. Deleted			
7. Fire Protection Pump and Power Supply	*Operability	Monthly	37
8. RCS Leak Detection	Operability	Weekly	8
9. Diesel Fuel Supply	*Fuel Inventory	Weekly	8
10. Turbine Stop and Governor Valves	Operability	Monthly(1)	37(1)
11. Fuel Assemblies	Visual Inspection	Each refueling outage	N.A.
12. Guard Pipes	Visual Inspection	Each refueling outage	N.A.

5.3 REACTOR

Applicability

Applies to the reactor core and the Reactor Coolant System.

Objective

To define those design features which are essential in providing for safe system operations.

Specifications

a. Reactor Core

1. The reactor core contains approximately 48 metric tons of uranium in the form of slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy-4 tubing to form fuel rods. The reactor core is made up of 121 fuel assemblies. Each fuel assembly contains 179 fuel rods. (1)
2. The average enrichment of the initial core is a nominal 2.90 weight percent of U-235. Three fuel enrichments are used in the initial core. The highest enrichment is a nominal 3.40 weight percent of U-235. (2)
3. Reload fuel will be similar in design to the initial core.
4. Burnable poison rods are incorporated in the initial core. There are 704 poison rods in the form of 8, 12 and 16 rod clusters, which are located in vacant rod cluster control tubes. The burnable poison rods consist of borosilicate glass clad with stainless steel.
5. There are 29 full-length Rod Cluster Control (RCC) assemblies in the reactor core. The full-length RCC assemblies contain a 142-inch length of silver-indium-cadmium alloy clad with stainless steel.

- Review of all Reportable Events
- J. Review of changes to the Process Control Program, the Offsite Dose Calculation Manual, and the Radiological Environmental Monitoring Manual.

AUTHORITY

6.5.1.7 The PORC shall:

- a. Recommend to the Plant Manager approval or disapproval of items considered under 6.5.1.6a through e above.
- b. Make determinations with regard to whether or not each item considered under 6.5.1.6 above constitutes an unreviewed safety question.
- c. Provide immediate notification in the form of draft meeting minutes to the Manager - Nuclear Power and the Chairman-Nuclear Safety Review and Audit Committee of disagreement between the PORC and the Plant Manager. The Plant Manager shall have responsibility for resolution of such disagreements.

RECORDS

- 6.5.1.8 Minutes shall be kept of all meetings of the PORC and copies shall be sent to the Manager - Nuclear Power and the Chairman - Nuclear Safety Review and Audit Committee.

6.5.2 CORPORATE SUPPORT STAFF (CSS)

FUNCTION

- 6.5.2.1 The CSS shall function to provide engineering, technical and quality assurance activities in support of the Kewaunee Plant Staff.

- a. At least three technically qualified persons who are not members of the plant staff.
- b. One member from the supervisory staff of the plant.
- c. At least two qualified non-company affiliated technical consultants.
- d. Plus in-house staff management advisors as required.

The Committee membership and its Chairman and Vice Chairman shall be appointed by the Senior Vice President - Power Production or such person as he shall designate. Each member of the NSRAC shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of five years technical experience, of which a minimum shall be in one or more areas given in 6.5.3.1.

ALTERNATES

- 6.5.3.3 Alternate members shall be appointed by the NSRAC Chairman, upon approval by the Senior Vice President - Power Production, to serve on a temporary basis; however, no more than two alternates shall participate in NSRAC activities at any one time.

CONSULTANTS

- 6.5.3.4 Consultants may be utilized as determined by the Chairman - NSRAC to provide expert advice to the NSRAC.

MEETING FREQUENCY

- 6.5.3.5 The NSRAC shall meet at least once every six months.

- g. Any other area of plant operation considered appropriate by the NSRAC or the Senior Vice President - Power Production.
- h. The radiological environmental monitoring program and the results thereof at least annually.
- i. The Offsite Dose Calculation Manual and implementing procedures at least once every two years.
- j. The Process Control Program and implementing procedures for processing and packaging of radioactive wastes at least once every two years.

AUTHORITY

6.5.3.9 The NSRAC shall report to and advise the Senior Vice President - Power Production on those areas of responsibility specified in Section 6.5.3.7 and 6.5.3.8.

RECORDS

6.5.3.10 Records of NSRAC activities shall be prepared, approved and distributed as follows:

- a. Minutes of each NSRAC meeting forwarded to the Senior Vice President - Power Production within 14 days following each meeting.
- b. Reports of reviews required by Section 6.5.3.7e, f, g and h above, forwarded to the Senior Vice President - Power Production within 14 days following completion of the review.
- c. Reports of audits performed by NSRAC shall be forwarded to the Senior Vice President - Power Production and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.6 REPORTABLE EVENTS

Actions

6.6.1 The following actions shall be taken for Reportable Events:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of 10CFR50.73, and
- b. Each Reportable Event shall be reviewed by PORC, and the results of this review shall be submitted to NSRAC and the Senior Vice President - Power Production.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a safety limit is violated:

- a. The reactor shall be shutdown and operation shall not be resumed until authorized by the Commission.
- b. The Report shall be prepared in accordance with Section 6.6 of the Technical Specifications.

6.8 PROCEDURES

6.8.1 Written procedures and administrative policies shall be established, implemented and maintained that meet the requirements of the Operational Quality Assurance Program Description.

6.8.2 Temporary changes to procedures are made in accordance with the provisions of the Operational Quality Assurance Program Description except that changes which clearly do not change the intent of the procedure shall, as a minimum, be approved by two individuals knowledgeable in the area affected one of which holds a valid SRO license at Kewaunee.

6.8.3 Deleted